

SGCN and Stressors Associated with Habitats

Macrogroup: Intertidal Mudflat

Habitat Systems within Macrogroup:

MacrogroupName Intertidal Mudflat

Freshwater Tidal Marsh

Mudflat Macrogroup - Unknown Habitat System (i.e. Macrogroup)

Non-Vascular Mudflat

Submerged Aquatic Vegetation

Description: From the NTHCS: "Intertidal mudflats are usually located in quiet pockets of bays and protected by headlands. Sand-sized particles are mixed with silt and clay. These flats can be highly productive of clams and other invertebrates, and are important habitats for many shorebird species, including the semipalmated sandpiper, semipalmated plover, short-billed dowitcher, black-bellied plover, and least sandpiper. In the summer, green macroalgae such as sea lettuce and hollow green weed can cover these mudflats. Other characteristic species include ditchgrass and eelgrass." The Macrogroup is the same as the NTHCS Intertidal Mudflat Habitat System. Also adopted from CMECS Substrate Components. This category is equivalent to CMECS Substrate Class-Fine Unconsolidated shore, Substrate-Mud. This includes particle size silt, silt-clay, and clay. The group is expanded upon from the NTHCS system. The Freshwater Tidal Marsh system is the same habitat as the NTHCS "Acadian Estuary Marsh", but moved to the Mud Macrogroup and used the MNAP name and description of "Freshwater Tidal Marsh" consistent with MNAP, and to be more intuitive.

SGCN Associated With This Habitat

Total SGCN: 1: 7 2: 13 3: 16

Class	<i>Actinopterygii</i> (Ray-finned Fishes)	SGCN Category
Species	<i>Acipenser oxyrinchus</i> (Atlantic Sturgeon)	1
Species	<i>Osmerus mordax</i> (Rainbow Smelt)	1
Species	<i>Acipenser brevirostrum</i> (Shortnose Sturgeon)	1
Class	<i>Asteroidea</i> (Sea Stars)	SGCN Category
Species	<i>Asterias rubens</i> (Common Sea Star)	2
Species	<i>Asterias forbesi</i> (Forbes's Starfish)	2
Class	<i>Aves</i> (Birds)	SGCN Category
Species	<i>Haematopus palliatus</i> (American Oystercatcher)	3
Species	<i>Bucephala islandica</i> (Barrow's Goldeneye)	1
Species	<i>Pluvialis squatarola</i> (Black-bellied Plover)	3
Species	<i>Nycticorax nycticorax</i> (Black-crowned Night-heron)	2
Species	<i>Calidris alpina</i> (Dunlin)	3
Species	<i>Ardea herodias</i> (Great Blue Heron)	2
Species	<i>Aythya marila</i> (Greater Scaup)	2
Species	<i>Tringa melanoleuca</i> (Greater Yellowlegs)	3
Species	<i>Calidris minutilla</i> (Least Sandpiper)	3
Species	<i>Tringa flavipes</i> (Lesser Yellowlegs)	1
Species	<i>Egretta caerulea</i> (Little Blue Heron)	3
Species	<i>Calidris canutus rufa</i> (Red Knot)	1
Species	<i>Arenaria interpres</i> (Ruddy Turnstone)	2
Species	<i>Calidris alba</i> (Sanderling)	2
Species	<i>Calidris pusilla</i> (Semipalmated Sandpiper)	2
Species	<i>Limnodromus griseus</i> (Short-billed Dowitcher)	3
Species	<i>Egretta thula</i> (Snowy Egret)	3
Species	<i>Numenius phaeopus</i> (Whimbrel)	2

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Species	<i>Tringa semipalmata</i> (Willet)	3
Class	<i>Bivalvia</i> (Marine And Freshwater Molluscs)	SGCN Category
Species	<i>Zirfaea crispata</i> (Atlantic Great Piddock)	2
Species	<i>Mytilus edulis</i> (Blue Mussel)	3
Species	<i>Crassostrea virginica</i> (Eastern Oyster)	3
Species	<i>Mya truncata</i> (Gaper Clam)	3
Species	<i>Mercenaria mercenaria</i> (Hard-shelled Clam)	3
Species	<i>Mya arenaria</i> (Softshell Clam)	3
Class	<i>Gastropoda</i> (Aquatic And Terrestrial Snails)	SGCN Category
Species	<i>Boreotrophon clathratus</i> (Clathrate Trophon)	2
Species	<i>Colus pygmaeus</i> (Colus Snail)	2
Species	<i>Boreotrophon truncatus</i> (Murex)	2
Species	<i>Floridobia winkleyi</i> (New England Silt Snail)	3
Species	<i>Limneria undata</i> (Wavy Lamellaria)	3
Class	<i>Merostomata</i> (Horseshoe Crabs And Sea Scorpions)	SGCN Category
Species	<i>Limulus polyphemus</i> (Horseshoe Crab)	1

Endangered (E) and Threatened (T) Plant Species Associated With This Habitat

Class	Dicots <i>Dicotyledoneae</i>	State Status
Species	Long's Bitter-cress <i>Cardamine longii</i>	T
Class	Monocots <i>Magnoliopsida</i>	State Status
Species	Stiff Arrowhead <i>Sagittaria rigida</i>	T
Class	Monocots <i>Monocotyledoneae</i>	State Status
Species	Marsh Bulrush <i>Bolboschoenus novae-angliae</i>	E

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Stressors Associated With This Macrogroup

IUCN Level 2 Threat Name: Agricultural and Forestry Effluents

Notes: Though this threat can be reduced with the implementation of best management practices, in coastal watersheds, runoff can lead to non-point source pollution of nutrients, fertilizer, sediments, pesticides, vehicle contaminants, etc., which can lead to poor

IUCN Level 2 Threat Name: Commercial and Industrial Areas
IUCN Level 2 Threat Name: Domestic and Urban Waste Water

Notes: Though this threat can be reduced with the implementation of best management practices, in coastal watersheds, runoff can lead to non-point source pollution of nutrients, fertilizer, sediments, pesticides, vehicle contaminants, etc., which can lead to poor

IUCN Level 2 Threat Name: Fishing and Harvesting of Aquatic Resources

Notes: In combination with the natural stressors, harvesting resources can stress some species and the mudflat environment; these impacts can affect the target and non-target species (e.g. clammers and wormers often disturb the mud and impact the other industry)

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Notes: In combination with the natural stressors, harvesting resources can stress some species and the mudflat environment; these impacts can affect the target and non-target species (e.g. clammers and wormers)

IUCN Level 2 Threat Name: Habitat Shifting or Alteration

Notes: Sea level rise will drown these habitats; ocean acidification may make them uninhabitable

IUCN Level 2 Threat Name: Housing and Urban Areas
IUCN Level 2 Threat Name: Industrial and Military Effluents

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during

IUCN Level 2 Threat Name: Invasive Non-native-Alien Species-Diseases

Notes: E.g. Green crabs appear to be a voracious predator that preys on some native species in the mudflats; soft shell clam cancer

IUCN Level 2 Threat Name: Lack of knowledge
IUCN Level 2 Threat Name: Marine and Freshwater Aquaculture

Notes: Most effects from finfish aquaculture have been successfully mitigated through the establishment of industry standards that have resulted in drastically reduced algal growth and improved water quality. Activities that use similar species (propagated

IUCN Level 2 Threat Name: Recreational Activities

Notes: Slight disturbance from recreational boating, clam harvesting, etc.

IUCN Level 2 Threat Name: Roads and Railroads

Notes: Causeways built across mudflats reduce water flow, larval dispersion of mud flat species (e.g. Clams), and affect sediment flushing

IUCN Level 2 Threat Name: Shipping Lanes

Notes: Dredging associated with harbors

IUCN Level 2 Threat Name: Storms and Flooding

Notes: Leads to more high-nutrient run-off which may cause harmful algal blooms and enhance coastal acidification

IUCN Level 2 Threat Name: Utility and Service Lines

Habitat Conservation Actions:

Relevant conservation actions for this habitat are assigned within broader habitat groupings in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

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Species Conservation Actions:

Conservation actions that may benefit species associated with this habitat can be found in Maine's 2015 Wildlife Action Plan: Element 1, Table 1-3. Click on the species of interest to launch a species based report summarizing relevant conservation actions and associated habitats.

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.